

FACTORS AFFECTING POST GRADUATE STUDENTS' ATTITUDE AND
BEHAVIORAL INTENTION TOWARD ONLINE SHOPPING

FAEZEH MIRGHASEMI

A thesis submitted in fulfilment of the
requirements for the award of the degree of
Master of Management (Technology)

Faculty of Management
Universiti Teknologi Malaysia

APRIL 2014

This dissertation is dedicated to my lovely mother, father and my dear husband for their endless support and encouragement during the period of doing this research. My friends and classmates who helped me and supported me doing this research.

ACKNOWLEDGEMENT

Firstly, without the protection and direction from Allah, all other supports given wouldn't have passed through. Alhamdulillah, for being my refuge in life and giving me the strength to face the challenges.

I would like to express heartfelt gratitude and a very big thank you to my supervisor **Prof.Dr. Rohaizat Baharun** and my co-supervisor **Assoc. Prof. Nor Sa'adah Abd. Rahman** for their constant supports during my study at UTM. They inspired me greatly to work in this project. Their willingness to motivate me contributed tremendously to our project. I have learned a lot from them and I am fortunate to have them as my mentors and supervisors.

Besides my advisors, I would like to thank my thesis committee: Dr. Zuraidah Sulaiman and Assoc. Prof Dr. Mohd Shoki Mohd Arif, for their beneficial critics, insightful comments, and questions. Thanks to all my lecturers at Universiti Teknologi Malaysia. Thanks to all my friends and/or classmates, who kept me smiling and accompany during my study period.

Special thanks to my lovely mother and father and my dear husband who have supported me throughout entire process, both by keeping me harmonious and helping me putting pieces together. I will be grateful forever for your love.

ABSTRACT

The increasing use of the Internet in Malaysia provides a developing prospect for E-marketers. Such marketers' awareness of the factors affecting Malaysian's shopping attitudes and intentions is crucial to further develop their marketing strategies in converting potential customers into active ones, while maintaining the existing online customers. Attitude is an important determinant of online shopping behaviour and represents the best estimates of future behavior available to market researchers. Among all the theories, the Decomposed Theory of Planned Behavior model determines particular salient beliefs that might influence Information Technology usage and will predict the behavioral intention more reliable. This study sets out to examine the factors influencing students' online shopping attitudes and intentions at University Technology Malaysia through a five-point Likert scale questionnaire. Also present study examined the mediating role of Attitude between independent variables and behavioral intention. In this research the non- probability and Simple random sampling were chosen and the data were collected from 375 postgraduate students in university. Data were analysed by structural equation modelling using the Partial Least Squares (PLS) approach. During the analysis, several methods were used such as, reliability and validity analysis and t-test. The results of the study showed that perceived usefulness and compatibility were significantly and positively correlated with the attitude of students towards online shopping and also trust as an extent factor indicated to have positive influence on mediator, while perceived ease of use did not provide the significant relationship on attitude. Moreover, it was found that attitude fully mediate the relationship between trust and behavioural intention and also perceived usefulness and Behavioral Intention, whereas, attitude partially mediates the relation between perceived ease of use and Behavioral Intention and also compatibility and behavioural intention. This study provides e-retailers with an assessment of attitude and intention of students segment market to enhance their existing marketing strategies and identify the new emergence of opportunity.

ABSTRAK

Penggunaan Internet yang semakin meningkat di Malaysia menyediakan prospek pembangunan untuk E- pemasar. Kesedaran pemasar berkenaan faktor yang mempengaruhi sikap dan niat membeli-belah masyarakat Malaysia adalah penting untuk membangunkan strategi pemasaran mereka dalam menukarkan pelanggan yang berpotensi menjadi pelanggan yang aktif , di samping mengekalkan pelanggan dalam talian yang telah sedia ada. Sikap adalah penentu penting dalam tingkah laku membeli-belah dalam talian dan merupakan pengukuran terbaik tingkah laku masa depan yang ada untuk menyelidik pasaran. Antara semua teori , model Theory of Planned Behavior menentukan kepercayaan penting tertentu yang mungkin mempengaruhi penggunaan teknologi maklumat dan akan meramalkan niat berperilaku yang lebih dipercayai. Kajian ini bertujuan untuk mengkaji faktor-faktor yang mempengaruhi sikap membeli-belah dalam talian pelajar dan niat di Universiti Teknologi Malaysia (UTM) melalui soal selidik lima mata skala Likert. Kajian ini juga mengenalpasti peranan pengantara sikap antara pembolehubah bebas dan niat berperilaku *behavioural intention*. Dalam kajian ini bukan kebarangkalian dan persampelan rawak mudah telah dipilih dan data telah dikumpul daripada 375 orang pelajar pasca-siswazah di Universiti Teknologi Malaysia (UTM). Data dianalisis dengan persamaan struktur model menggunakan pendekatan *Partial Least Square*. Semasa analisis ini, beberapa kaedah telah digunakan seperti kebolehpercayaan, analisis kesahihan dan ujian-t. Keputusan kajian menunjukkan bahawa manfaat dan tahap keserasian secara signifikan berhubung secara positif serta berkait rapat dengan sikap pelajar terhadap pembelian dalam talian dan juga kepercayaan sebagai faktor yang menentukan pengaruh positif terhadap pengantara manakala tanggapan mudah guna *perceive ease of use* tidak memberikan hubungan yang signifikan pada sikap. Selain itu , didapati sikap yang menjadi pengantara sepenuhnya hubungan di antara kepercayaan dan niat berperilaku *behavioural intention* dan tanggapan mudah guna *perceive ease of use* dan niat berperilaku *behavioural intention*, manakala sikap menjadi pengantara sebahagian hubungan antara tanggapan mudah guna *perceive ease of use* dan niat berperilaku *behavioural intention* dan juga keserasian dan niat berperilaku *behavioural intention*. Kajian ini menyediakan e -peruncit dengan penilaian sikap dan niat untuk pasaran segmen pelajar untuk meningkatkan strategi pemasaran mereka yang sedia ada dan mengenal pasti kemunculan peluang-peluang baru .

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Background of the study	2
	1.3 Problem Statement	5
	1.4 Research Questions	8
	1.5 Research objectives	8
	1.6 Scope of the study	9
	1.7 Significance of study	10
	1.8 Definition of key terms	11
 2	 LITERATURE REVIEW	 14
	2.1 Introduction	14
	2.2 Definitions and aspects of E-commerce	14
	2.2.1 Online shopping definitions and motivations	17
	2.2.2 The benefits of online shopping	19
	2.3 An overview of online shopping in the world	21
	2.3.1 Online shopping in Malaysia	24
	2.3.2 Online shopping among students	26
	2.4 The need to investigate online purchase intention among Malaysian	29
	2.5 Major research models	31
	2.5.1 Theory of Reasoned Action (TRA)	32
	2.5.2 Technology acceptance model (TAM)	33
	2.5.3 Theory of planned behavior	35
	2.5.4 Decomposed Theory of Planned Behavior (DTPB)	37

	2.5.5 Comparison between TAM, TPB and DTPB	39
	2.6 Importance of attitude factor in online shopping concept	40
	2.7 Expanding decomposed model: Trust (perceived reliability)	41
	2.8 Research model and hypotheses	43
	2.8.1 Perceived Usefulness (PU)	45
	2.8.2 Perceived Ease of Use (PEOU)	47
	2.8.3 Compatibility (COM)	48
	2.8.4 Trust (TR)	49
	2.8.5 Decomposing Attitude (A)	50
	2.8.6 Behavioral intentions (BI)	51
	2.9 Related research	54
	2.10 Chapter summery	58
3	METHODOLOGY	60
	3.1 Introduction	60
	3.2 Research Design	61
	3.3 Sampling Frame	62
	3.3.1 Target Population	62
	3.3.2 Sample selection	63
	3.3.3 Sample Size	64
	3.4 Data Collection	67
	3.5 Research Instrument	68
	3.6 Validity and Reliability of the Research	72
	3.6.1 Convergent and Discriminant Validities	73
	3.7 Data analysis	75
	3.7.1 Study of Mediation effects	78
	3.8 Chapter summery	79
4	DATA ANALYSIS	81
	4.1 Introduction	81
	4.2 Validity and reliability of the model	82
	4.2.1 Validity	83

4.2.1.1	Convergent validity	83
4.2.1.2	Discriminant validity	85
4.2.2	Reliability and factor loading	85
4.3	Respondents Background	88
4.4	Model Fit	90
4.5	Path Analysis	91
4.6	Hypothesis Testing	92
4.6.1	Analysis of the Relationship between Perceived Usefulness and Attitude	94
4.6.2	Analysis of the Relationship between Perceived Ease of Use and Attitude	95
4.6.3	Analysis of the relation between Compatibility and Attitude	96
4.6.4	Analysis of the Relationship between Trust and Attitude	97
4.6.5	Summary of Results of Hypotheses Testing	98
4.6.6	Mediating Effect of attitude in the Relationship between independent and dependent variables	99
4.7	Chapter summary	106
5	CONCLUSION AND RECOMMENDATION	107
5.1	Introduction	107
5.2	Overview of the Study	107
5.3	Summary of the Main Findings	108
5.4	Discussion of the Study	109
5.4.1	How does perceived usefulness, impact attitude toward online shopping?	110
5.4.2	How does perceived ease of use impact attitude regarding online shopping?	111
5.4.3	How does compatibility impact attitude regarding online shopping?	113
5.4.4	How does trust impact attitude toward online shopping?	114

5.4.5 How does attitude mediate the relation between trust, perceived ease of use, perceived usefulness, compatibility and online purchase intentions?	115
5.5 Managerial Implications and recommendation	116
5.6 Limitations	119
5.7 Further Research	120
5.8 Conclusions	121
REFERENCES	123
APPENDICES	133

LIST OF TABLES

TABLE NO.	TITLE	PAGE
2.1	Reasons for shopping online	19
2.2	Variables and type of them	45
2.3	Hypotheses of the study	52
2.4	Definitions of variables of the study	53
2.5	Related research	56
3.1	Table for determining sample size from a given population	65
3.2	Faculties of UTM University and the given numbers	66
3.3	Questionnaire Measures and Sources	71
3.4	Likert Scale's Table	72
3.4	Hypotheses and relationship	76
3.5	Guilford's suggested interpretation for CF values (Guildford 1965)	77
3.6	Hypothesis no. 5	78
4.1	Convergent Validity and communalities	84
4.2	Discriminant Validity	85
4.3	Internal Consistency	87
4.4	Characteristics of the Respondents	89
4.5	Variance result	91
4.6	Correlation between attitude and perceived usefulness	94
4.7	Correlation between attitude and perceived ease of use	95
4.8	Correlation between attitude and compatibility	96
4.9	Correlation between attitude and trust	97
4.10	Hypothesis results	99
4.11	Correlation between BI and TR, PU, PEU, COM	101
4.12	Correlation between attitude and independent variables	102
4.13	Correlation between A and BI	103
4.14	Correlation between BI, A and TR (model summary)	104

4.15	Correlation between BI and A and PU (model summary)	105
4.16	Correlation between BI and A and PEU (model summary)	105
4.17	Correlation between BI, A and COM (model summary)	106

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
1.1	Purpose of Internet users in Malaysia Source: (MCMC, page 19, 2012)	6
2.1	Comparison of online users and online buyers in selected countries Source: (http://www.statista.com , 2011)	22
2.2	Growth of Internet usage in Malaysia Source: (IDC, http://www.asean.idc.asia , 2008-2012)	25
2.3	Age group Internet users in Malaysia Source: (MCMC, page 11, 2012)	27
2.4	Purpose of Internet users in Malaysia Source: (MCMC, page 19, 2012)	29
2.5	Model of TRA by Davis (1989) Source: Davis et al. (1989)	32
2.6	Technology Acceptance Model Source: by Davis (1989)	34
2.7	Model of TPB by Azjen (1991) Source: by Azjen (1991)	36
2.8	Model of Decomposed Theory of Planned Behavior (DTPB) Source: Taylor and Todd (1995)	38
2.9	Conceptual Model	44
2.10	Conceptual model and hypothesis	58
4.1	Outcome of the structural path analysis	92
4.2	Hypothesis Testing result	93
4.3	The Conceptual Model – Results of Path Significances	98
4.4	Relation between COM and BI	101

List of Abbreviation

TRA	Theory of Reasoned Action
TAM	Technology acceptance model
TPB	Theory of planned behavior
DTPB	Decomposed Theory of Planned Behavior
PU	Perceived Usefulness
PEOU	Perceived Ease of Use
COM	Compatibility
TR	Trust
A	Decomposing Attitude
BI	Behavioral intentions
UTM	University Technology Malaysia
IDC	International Data Corporation
MCMC	Malaysian Communication and Multimedia Commission
B2C	Business to Customer (B2C)
B2B	Business-to-Business
BIB	Business-in-Business
C2C	Consumer-to-Consumer
MIMOS Systems	Malaysian Institute of Microelectronic Systems
IDT	Innovation Diffusion Theory
IV	Independent Variable
DV	Dependent Variable
AVE	Average Variance Extracted
PLS	Partial Least Squares
SEM	Structural Equation Modelling
CR	Composite Reliability
MV	Mediator Variable

LIST OF APPENDIX

APPENDIX NO	TITLE	PAGE
A	Questionnaire	133-138

CHAPTER 1

1.1 Introduction

The increasing usage of the Internet in Malaysia, gives a developing prospect for electronic marketers. Such marketers' understanding of the factors influencing Malaysian's shopping attitudes and intentions, is important to more develop their marketing strategies in changing potential customers into active ones, while maintaining the existing customers.

Purchase intention is one of the important determinant of online shopping behaviour and shows the best estimates of future behavior available to market researchers. From an e-commerce perspective, understanding of the Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), and Technology Acceptance Model (TAM), can provide a good basis for explaining and predicting consumers' intentions towards adopting online shopping behaviour.

The main goal of this study is to investigate purchasing intention of post-graduate students at University Technology Malaysia, with a particular emphasis on understanding and evaluating the factors that have influence on their attitude towards online shopping.

This chapter describes the context of the research. It began with a background of the study. Afterwards, the problem discussion was presented which in turn lead to the study's research questions. Then, this was followed by significance of study, limitation, scope, and finally definition of key terms.

1.2 Background of the Study

These days, Internet is not just a networking media which provides a lot of information for users, yet it is also used as a way of transaction for customers at world wide market. Using Internet has grown quickly during the past years and has become a common means for delivering and trading information, products and services (Albarq, 2006). The number of internet users has been continuously increasing all over the world, including developing countries. According to (Euromonitor International, 2012), in Asia and Eastern Europe internet access rates were considerably higher during the year 2012.

As the number of internet users increases, the number of customers who shop over the internet is also growing. In addition, due to a more comfortable feeling of shopping online, the younger generation is turning to Internet procurement (Euromonitor International, 2012). According to (Euromonitor International, 2012), worldwide online shopping sales achieved €341.3 billion in 2011, which was a growth of 22 percent from the previous year. In Europe online shopping sales were €110.1 billion in 2011 that shows growth of 18 percent from 2010. This trend is expected to continue increasing to €670 billion by 2015 (Euromonitor International, 2012).

Online shopping continues to grow remarkably during the past ten years with

regard to a number of reasons which includes changing standards of living, technological improvements and increasing number of educated individuals as well as their income. Hence, manufacturers and retailers need to change the way they are doing their business (a transformation from traditional retailing to e-retailing). To be reasonably competitive, those conventional retailers and companies should build up new strategies to remain updated in this new area (online shopping development). To achieve this goal, all the dimensions of this change should be understood before starting to invest in this new opportunity. Thus, consumer's acceptance and realizing the intention of the customer which are the most important dimensions need to be considered.

In Malaysia also, Internet retailing is expected to have a continuous growth, due to the increasing penetration rate of the internet. The Malaysian government predicts that the broadband penetration rate will reach 75% by 2015 (Euromonitor International, 2012). Therefore, government efforts, together with other entities, will help to improve the broadband penetration rate, whilst boosting internet retailing within Malaysia over the forecast period.

Brick-and-mortar companies see the opportunities of doing e-commerce and tend to implement multi-channel strategies. It is clear that e-commerce has created opportunities for both, small and large companies and a wide range of benefits for consumers as well. Compared to traditional brick-and-mortar stores, online stores have many advantages for consumers that will be referred to it later in detail, while the important ones are convenience, unlimited availability and access to global markets.

However, Kiang et al (2011) investigated that, even though the statistics showed growing online sales, there are still many online customers who use the data gathered online, making purchases offline. This can be proved by the large abandon rates of purchasing carts. Additionally as considered by Broekhuizen and Huizingh, (2009), customers utilize online stores to achieve current market information, where

they discover more about prices as well as a product or service differences, but they do not make the last transaction using the online shop.

On the other hand, the role of a user's personal attitude has been broadly proven in customer decision making and behavioural intentions (Shwu-Ing, 2003). Based on TAM model, personal attitudes serve as one of the significant factors among constructs like perceived usefulness and perceived ease of use. In other words, particularly, attitude is like a link between consumers' characteristics and the consumption that meets their needs (Armstrong & Kotler, 2000; Shwu-Ing, 2003). According to (Wright, Sharp, 2002), intentions and attitudes regarding online shopping are very important as they will represent the best estimation of the upcoming behavior available to market researchers (Wright, 2002).

As mentioned, behavioral intention is determined by consumer's attitudes toward acting the behavior. From an e-business perspective, understanding theories like TRA, TPB, and TAM can provide an appropriate foundation to explain and predict consumers' intention toward adopting online shopping behaviour (Choi and Geistfeld, 2003; Goldsmith, 2002). This understanding will allow e-commerce managers to obtain better insights into the customers' e-shopping motivation and facilitate them in developing effective strategies toward growing website traffic flow (Aldridge et. al, 1997; Wysocki, 2000).

It is important to point out that, many researchers claimed that, there has been an expansion of educational services in Malaysia, while consequently university students have become one of the important consumer market segments (Sabri et al, 2008). Therefore, due to the students' purchasing power in the market, it is vital for web retailers and marketers to completely understand the attitude and intention of this particular group towards online shopping. Hence, to successfully attract this particular population, e-retail service providers must learn more about them, especially in relation to their attitude towards online shopping, and online shopping intentions.

The main goal of this study was to investigate purchasing intention of post-graduate students at University Technology Malaysia, with a particular emphasis on understanding and evaluating the factors which indirectly influence their purchasing intention by measuring the mediating role of attitude towards online shopping.

1.3 Problem Statement

According to (Internetworldstats), population of Malaysia in 2012 was 29,179,952. While the number of internet users in the year 2000 was 3,700,000, the figure increased to about 18,000,000 in the year 2012. However, according to international data corporation (IDC), from this population (online users), around 10 million people were online shoppers in the year 2012. According to Malaysian Communication and Multimedia Commission (MCMC, 2012), it seems that, shopping is not the main factor driving Malaysian to access the Internet. Graph 1.1 proved this fact that, online shopping is not a significant purpose for internet users to access the Net in Malaysia.

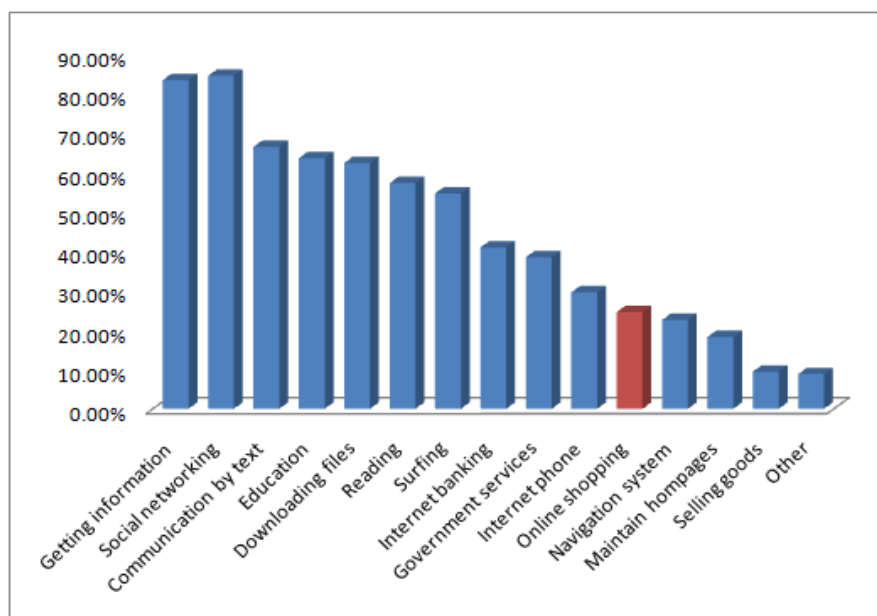


Figure 1.1: Purpose of Internet users in Malaysia

Source: (MCMC, page 19, 2012)

The Malaysian consumers making an online purchase, look for advantages like comfort, cost saving, lower prices, a method to effortlessly search for the data they need, and a 24-hours services (Haque, et.al, 2007). In spite of several advantages of online retailing and rapid growth of the Internet user population, online sales results were not very promising and most of the Malaysians (76 %), particularly younger individuals used the internet for non-shopping activities like searching for information, playing games, amusement or interacting with friends (Hamid & Khatibi, 2006). Chua et al, (2006) in their study claimed that, unlike the higher potential of online purchasing in Malaysia, there are still deficiencies in understanding online shopping concept.

In addition, electronic-commerce happens to be a significant sales channel and marketing. Hence, it is crucial for retailers to know the factors that move consumers to purchase online. Understanding these factors enables them to fulfill customers' requirements and for online marketers to target buyers more effectively. As Shwu-Ing, (2003) suggested, the group with the most positive attitude is likely to be the target market. E-retailers tend to be successful only when they recognize

online shoppers' needs and provide benefits to customers.

The main determinant of the individual's behavior is his/her attitude towards that behavior (Davis, 1989). For this reason, marketers need to understand the consumers' acceptance of e-shopping to attract them to buy online. As pointed out by Shwu-Ing, (2003), attitude directly affects decision making and is a main key to a buyer's intention for shopping online. According to a research conducted by Haque et al. (2006), attitude toward online purchasing is negative among people of Malaysia. It is very important to understand the factors influencing attitude changes and formation. Therefore, in order to increase the rate of online shopping in Malaysia, understanding consumer online shopping behavioural intention and factors influencing this behaviour, needs to be more investigated. Hence, a framework is required to investigate more about the effects of different factors on consumers' intention, and develop an in-depth understanding of customers' attitudes toward online shopping and individuals' intentions to shop online.

Moreover, as investigated by Jariah, et.al (2004), with the growth of academic services in Malaysia, university students have become one of the most significant market sectors for two main reasons; Firstly, this group has shopping interests and access to Internet. Next, this segment has the potential to earn more income compared to other segments of the population of online users. In present study post graduate students were chosen due to the reason that they might have job and salary compared to under graduate students who have just entered university. Thus, it could be significant to find out more about the elements that have influences on students' intention to purchase online if e-retailers tend to expand the number of online buyers as well as the volume of electronic-commerce. However, according to Haque et al., (2006), research that examining the students' behavior toward online shopping in Malaysia is limited in numbers. Hence, more researchers should enter this area, understand and find as more as possible, about the online shopping behavior of students segment.

1.4 Research Questions

Based on the research background of study, the researcher will address the research questions through the following questions:

RQ1. How does trust impact attitude toward online shopping?

RQ2. How does perceived usefulness impact attitude toward online shopping?

RQ3. How does perceived ease of use impact attitude regarding online shopping?

RQ4. How does compatibility impact attitude regarding online shopping?

RQ5. How does trust, perceived ease of use, perceived usefulness and compatibility mediating by attitude, impact online purchase intentions?

1.5 Research Objectives

The objectives of the study are to understand and to analyze the influence of some constructs like trust, perceived ease of use, perceived usefulness and compatibility on attitude toward online shopping and investigate the impact of those factors on behavioral intention of online consumers mediating with attitude. Main objectives of this study are as follows:

1. To determine the impact of trust on consumers' attitude toward online shopping.
2. To investigate the impact of perceived usefulness on consumers' attitude toward online shopping.

3. To examine the impact of perceived ease of use on consumers' attitude toward online shopping.
4. To examine the impact of compatibility on consumers' attitude toward online shopping.
5. To investigate the impact of consumers' trust, ease of use, usefulness and compatibility mediating by attitude on behavioral intention.

1.6 Scope of the Study

The research scope focused on the area of e-commerce, category of business to customer (B2C) and specifically on online shopping, in order to examine the impact of some factors on attitude toward online shopping and consequently on behavioral intention.

This study chose decomposed theory of planned behavior (DTPB) for assessing attitude and intention of consumers regarding online shopping among all the theories associated with concept of online shopping, mentioning that, only part of this theory have been used (attitude part) not the whole theory. According to this theory, there are three major constructs that influence attitude and consequently users' intention: perceived ease of use, perceived usefulness and compatibility (Taylor and Todd, 1995). Furthermore in this study author added one more construct which is recognized as one the significant factors influencing attitude by previous research in the area of online shopping, which is trust.

This study confined itself to investigating the online shopping behavior of current postgraduate students of university technology Malaysia (UTM) situated in

Skudai, state of Johor Bahru. The reason behind choosing students as respondents is that, university students are one of the important consumer market segments with the growth of academic services in Malaysia (Sabri, Masoud, 2008). Therefore, there is a need for e-retailers to understand more about this group to settle their strategy policy in order to attract them.

1.7 Significance of Study

The number of internet users has been continuously increasing all over the world, including developing countries like Malaysia. Consequently, online shopping has been growing during these years. University students have become one of the important consumer market segments (Sabri et al, 2008). Hence, there is a need of more research about the online shopping behavioral intention and the factors that influence it.

The results from this research will make a positive contribution to the future online customers behaviour literatures, references and information for future researchers by providing a deeper understanding of customer beliefs about online purchasing and how these impact attitude and intention toward online shopping.

Furthermore, the knowledge from this study provides useful information for e-retailers about the related factors that drive Internet users to shop online. The information help retailers adapt their own strategies to match consumer needs and attract and maintain consumers. From the marketing perspective, getting a useful understanding into online customer behavior is essential. The knowledge from this research will help to produce marketing strategies tailored in order to respond to online customer particular needs and requirements.

In addition, the statistics and figures show that electronic-commerce can be full of opportunity for businesses of any size and low obstacles to entry has made the market more competitive (Datamonitor, 2011). Hence, knowing online customer behaviour and what drives them to purchase online is vital for any business in order to be competitive.

According to Celik (2011), many retailers are in a competition against a congested market all around the world. To strengthen their own scope of success and obtain the benefit of the challenges they may face today, using the Internet as a tool for business is one effective way. Through online shopping, consumers have accessibility to more selections of products and services at their own convenience without any limitation of space and time (Brynjolfsson and Smith, 2000). Thus, it increases the issues of holding and attracting the users for the online retailers. To be able to gain this, it is important for e-retailers to be aware of the factors that influence the consumers to shop online (Al-Maghrabi, et al., 2011). Therefore, more studies are required to work on factors which influence the intention towards online shopping among people of Malaysia.

Moreover, consumers are considered as one of the most valuable assets in a business. To attract customers efficiently, a company needs to make sure that the demands and needs of the consumers are met properly. This study aims to explore the intention and attitude of online buyers in order to gain a better understanding of their demands.

1.8 Definition of Key terms

In this research, there are several terms that represent the key words. They will be frequently used.

Attitude towards online shopping: Attitude is defined as an individual's relatively consistent evaluations, feelings and tendencies toward an object or idea (Gordon and Turner, 1997). In this study attitude towards online shopping is defined as a user's positive or negative feelings associated with doing the purchasing behavior on the internet (Chiu et al., 2005; Schlosser, 2003). Clear understanding of consumer attitudes toward online shopping could help marketers predict the online shopping rate and evaluate the future growth of online commerce as well as formulating strategy, technology and marketing decisions (Wolfenbarger and Gilly, 2003).

Behavioral intention: Intention is assumed to capture the motivational factors of a behavior and to indicate how hard individuals are willing to try or how much effort they will use to accomplish the behaviour (Ajzen, 1991, p. 181).

Perceived usefulness: According to Davis (1989), perceived usefulness is described as the degree to which individuals believes that to use a particular system would enhance their job performance. A system which is high in perceived usefulness, in return, will be the one which a user believes in the existence of a positive user relationship performance.

Perceived ease of use: Davis (1989) defined PEU as a degree to which the user expects that software systems should be effortless. The perceived ease of use will be based on the user impression during the interaction with the web page and the online shopping software. The web page and online purchasing software should be user-friendly and easy to operate in order to attract the user.

Compatibility: Compatibility is an indicator of how well an innovation fits a potential adopter's values and needs (Vijayasarathy, 2003). For present study, compatibility is defined as the extent to which consumers believe that shopping online matches their lifestyle, requirements and shopping preference.

Perceived reliability (trust): McKnight and Chervany (2001) defined trust as the extent to which one believes that the new technology usage will be reliable and credible. From B2C e-commerce perspective it can be explained as the belief that enable consumers to willingly become vulnerable to Web retailers after having taken the retailers' characteristics into consideration (Pavlou, 2003). What is important in these definitions is that trust in both the web retailer and online technologies underlie consumers' beliefs about the safety of shopping online. One key reason why many individuals are internet users but are not internet buyers is because of beliefs about the safety of conducting business over the internet (Gefen and Straub, 2003). Consumers' trust of e-retailers and internet technology are key factors that influence beliefs about safety.

Respondents: Respondents of this study are the current post graduate students of University Technology Malaysia who had at least one time experience of shopping online.

REFERENCES

- Raman, A., & Annamalai, V. (2011). Web Services and e-Shopping Decisions: A Study on Malaysian e-Consumer. *International Journal of Computer Applications, Special Issue on Wireless Information Networks & Business Information System*, (2), 54-60.
- Junoh, A. S. B., & bin Yaacob, M. R. (2011). Determinants of customer satisfaction towards broadband services in Malaysia.
- Namdari, E., Maroofiyan, M., & Emam, M. (2000). Perceived e-service quality in online shopping from malaysian customers' perspective.
- Al-Swidi, A. K., Behjati, S., & Shahzad, A. (2012). Antecedents of Online Purchasing Intention among MBA Students: The Case of University Utara Malaysia Using the Partial Least Squares Approach. *International Journal of Business and Management*, 7(15), p35.
- Paynter, J., & Lim, J. (2001). Drivers and impediments to e-commerce in Malaysia. *Malaysian Journal of library and Information science*, 6(2), 1-19.
- Delafrooz, N., Paim, L. H., & Khatibi, A. (2010). Students' online shopping behavior: An empirical study. *Journal of American Science*, 6(1), 137-147.
- Harn, A. C. P., Khatibi, A., & Ismail, H. (2006). E-Commerce: A study on online shopping in Malaysia. *Journal of Social Sciences*, 15(5), 232-242.
- McCole, P., Ramsey, E., & Williams, J. (2010). Trust considerations on attitudes towards online purchasing: The moderating effect of privacy and security concerns. *Journal of Business Research*, 63(9), 1018-1024.

Zendehdel, M., & Paim, L. H. (2013). Predicting Consumer Attitude to Use On-line Shopping: Context of Malaysia. *Life Science Journal*, 10(2).

Ibrahim, A. S., Khan, A. H., Rahman, M. K., & Ramezanie, E. (2013). Accessing the Effectiveness of Online Shopping Among Malaysian Consumers. *Australian Journal of Basic and Applied Sciences*, 7(7), 603-612.

Chan, E., & Swatman, P. M. (1999, November). Electronic commerce: A component model. In *Proceedings of the 3rd Annual COLLECTeR Conference on Electronic Commerce* (pp. 1999-1).

Ziadat, M. A., Malek, A. M., Al Muala, A., & Khawaldeh, K. (2013). Factors Affecting University Student's Attitudes toward E-Commerce: Case of Mu'tah University. *International Journal of Marketing Studies*, 5(5), p88.

Laohapensang, O. (2009). Factors influencing internet shopping behaviour: a survey of consumers in Thailand. *Journal of Fashion Marketing and Management*, 13(4), 501-513.

Huang, E., & Chuang, M. H. (2007). Extending the theory of planned behaviour as a model to explain post-merger employee behaviour of IS use. *Computers in Human Behavior*, 23(1), 240-257.

Roca, J. C., García, J. J., & de la Vega, J. J. (2009). The importance of perceived trust, security and privacy in online trading systems. *Information Management & Computer Security*, 17(2), 96-113.

George, J. F. (2004). The theory of planned behavior and Internet purchasing. *Internet research*, 14(3), 198-212.

Vijayasathya, L. R. (2004). Predicting consumer intentions to use on-line shopping: the case for an augmented technology acceptance model. *Information & Management*, 41(6), 747-762.

Chang, M. K., Cheung, W., & Lai, V. S. (2005). Literature derived reference models for the adoption of online shopping. *Information & Management*, 42(4), 543-559.

Kim, J. U., Kim, W. J., & Park, S. C. (2010). Consumer perceptions on web advertisements and motivation factors to purchase in the online shopping. *Computers in human behavior*, 26(5), 1208-1222.

Hsu, M. H., Yen, C. H., Chiu, C. M., & Chang, C. M. (2006). A longitudinal investigation of continued online shopping behavior: An extension of the theory of planned behavior. *International Journal of Human-Computer Studies*, 64(9), 889-904.

Kim, H. W., Xu, Y., & Gupta, S. (2012). Which is more important in Internet shopping, perceived price or trust?. *Electronic Commerce Research and Applications*, 11(3), 241-252.

Kim, C., Galliers, R. D., Shin, N., Ryoo, J. H., & Kim, J. (2012). Factors influencing Internet shopping value and customer repurchase intention. *Electronic Commerce Research and Applications*, 11(4), 374-387.

Jun, G., & Jaafar, N. I. (2011). A Study on Consumers' Attitude towards Online Shopping in China. *International Journal of Business and Social Science*, 2(22), 122-132.

Chang, M. K., Cheung, W., & Lai, V. S. (2005). Literature derived reference models for the adoption of online shopping. *Information & Management*, 42(4), 543-559.

Hernández, B., Jiménez, J., & Martín, M. J. (2011). Age, gender and income: do they really moderate online shopping behaviour?. *Online Information Review*, 35(1), 113-133.

Fang, Y. H., Chiu, C. M., & Wang, E. T. (2011). Emerald Article: Understanding customers' satisfaction and repurchase intentions: An integration of IS success model, trust, and justice. *Internet Research*, 21(4), 479-503.

Ha, S., & Stoel, L. (2009). Consumer e-shopping acceptance: antecedents in a technology acceptance model. *Journal of Business Research*, 62(5), 565-571.

Bray, J. P. (2008). *Consumer Behaviour Theory: Approaches and Models*.

Lee, M. C. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce Research and Applications*, 8(3), 130-141.

Liao, S. H., Chen, Y. J., & Lin, Y. T. (2011). Mining customer knowledge to implement online shopping and home delivery for hypermarkets. *Expert Systems with Applications*, 38(4), 3982-3991.

Domina, T., Lee, S. E., & MacGillivray, M. (2012). Understanding factors affecting consumer intention to shop in a virtual world. *Journal of Retailing and Consumer Services*.

Liljander, V., Van Riel, A. C., & Pura, M. (2002). Customer satisfaction with e-services: the case of an online recruitment portal. *Yearbook of Services Management*, 407-432.

Jusoh, Z. M., & Ling, G. H. Factors influencing consumers' attitude towards e-commerce purchases through online shopping.

Suki, N. M., Ramayah, T., & Suki, N. M. (2008). Internet shopping acceptance: Examining the influence of intrinsic versus extrinsic motivations. *Direct Marketing: An International Journal*, 2(2), 97-110.

Carlson, J., & O'Cass, A. (2010). Exploring the relationships between e-service quality, satisfaction, attitudes and behaviours in content-driven e-service web sites. *Journal of Services Marketing*, 24(2), 112-127.

Haque, A., Sadeghzadeh, J., & Khatibi, A. (2011). Identifying potentiality online sales in Malaysia: a study on customer relationships online shopping. *Journal of Applied Business Research (JABR)*, 22(4).

Mostaghel, R. (2006). Customer satisfaction: service quality in online purchasing in Iran.

Salwani, M. I., Marthandan, G., Norzaidi, M. D., & Chong, S. C. (2009). E-commerce usage and business performance in the Malaysian tourism sector: empirical analysis. *Information Management & Computer Security*, 17(2), 166-185.

Dholakia, N., Dholakia, R. R., Laub, M., & Hwang, Y. S. (1999). Electronic commerce and the transformation of marketing. *Internet-Marketing: Perspektiven und Erfahrungen aus Deutschland und den USA*, Stuttgart, 55-77.

Alam, S. S., Khatibi, A., Ahmad, M. I. S., & Ismail, H. B. (2008). Factors affecting e-commerce adoption in the electronic manufacturing companies in Malaysia. *International Journal of Commerce and Management*, 17(1/2), 125-139.

Jentzsch, R., & Miniotas, A. (1999). The Application of E-commerce to a SME. In *Proceedings 10 th Australasian Conference on Information Systems* (pp. 435-448).

Mansell, R. (2003). Electronic commerce: conceptual pitfalls and practical realities. *Prometheus*, 21(4), 429-447.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.

- Ziadat, M. A., Malek, A. M., Al Muala, A., & Khawaldeh, K. (2013). Factors Affecting University Student's Attitudes toward E-Commerce: Case of Mu'tah University. *International Journal of Marketing Studies*, 5(5), p88.
- Jariah, M., Husniyah, A. R., Laily, P., & Britt, S. (2004). Financial behavior and problems among university students: Need for financial education. *Journal of Personal Finance*, 3(1), 82-96.
- Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information systems research*, 6(2), 144-176.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- Pavlou, P. A., & Fygenon, M. (2006). Understanding and predicting electronic commerce adoption: an extension of the theory of planned behavior. *MIS quarterly*, 115-143.
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: an integrated model. *MIS quarterly*, 51-90.
- Monecke, A., & Leisch, F. (2012). semPLS: structural equation modeling using partial least squares. *Journal of Statistical Software*, 48(3), 1-32.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Esposito Vinzi, V., Chin, W. W., Henseler, J., & Wang, H. (2010). Handbook of partial least squares: Concepts, methods and applications.

- Hayes, A. F., & Scharkow, M. (2013). The Relative Trustworthiness of Inferential Tests of the Indirect Effect in Statistical Mediation Analysis Does Method Really Matter?. *Psychological science*, 24(10), 1918-1927.
- Bontis, N., Booker, L. D., & Serenko, A. (2007). The mediating effect of organizational reputation on customer loyalty and service recommendation in the banking industry. *Management Decision*, 45(9), 1426-1445.
- Henseler, J., & Sarstedt, M. (2013). Goodness-of-fit indices for partial least squares path modeling. *Computational Statistics*, 28(2), 565-580.
- Wu, I. L., & Chen, J. L. (2005). An extension of trust and TAM model with TPB in the initial adoption of on-line tax: an empirical study. *International Journal of Human-Computer Studies*, 62(6), 784-808.
- Van der Heijden, H., Verhagen, T., & Creemers, M. (2003). Understanding online purchase intentions: contributions from technology and trust perspectives. *European journal of information systems*, 12(1), 41-48.
- George, J. F. (2004). The theory of planned behavior and Internet purchasing. *Internet research*, 14(3), 198-212.
- Monsuwé, T. P., Dellaert, B. G., & De Ruyter, K. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management*, 15(1), 102-121.
- Park, E. (2013). The adoption of tele-presence systems: Factors affecting intention to use tele-presence systems. *Kybernetes*, 42(6), 869-887.
- Ziadat, A. L., Mamdouh, T., AL-Majali, M. M., Al Muala, A. M., & Khawaldeh, K. H. (2013). Factors Affecting University Student's Attitudes toward E-Commerce: Case of Mu'tah University. *International Journal of Marketing Studies*, 5(5).

Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information systems research*, 11(4), 342-365.

Koufaris, M., & Hampton-Sosa, W. (2002). Customer trust online: examining the role of the experience with the Web-site. *Information Systems Journal*, 5, 1-22.

Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. (2005). PLS path modeling. *Computational statistics & data analysis*, 48(1), 159-205.

Bollen, K. A., & Stine, R. (1990). Direct and indirect effects: Classical and bootstrap estimates of variability. *Sociological methodology*, 20(1), 15-140.

Fornell, C., & Cha, J. (1994). Partial least squares. *Advanced methods of marketing research*, 407, 52-78.

Wixom, B. H., & Watson, H. J. (2001). An empirical investigation of the factors affecting data warehousing success. *MIS quarterly*, 25(1), 17-32.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic management journal*, 20(2), 195-204.

Cooper, D. R., & Schindler, P. S. (2003). *Business research methods*.

Eagly, A. H., & Chin, J. L. (2010). Are memberships in race, ethnicity, and gender categories merely surface characteristics?

Gildenblata, G., Lia, X., Wanga, H., Wua, W., van Langeveldeb, R., Scholtenb, A. J., ... & Klaassenb, D. B. M. (2005). PSP Model.

Van der Heijden, H., Verhagen, T., & Creemers, M. (2003). Understanding online purchase intentions: contributions from technology and trust perspectives. *European journal of information systems*, 12(1), 41-48.

Boden, S. D., Titus, L., Hair, G., Liu, Y., Viggewarapu, M., Nanes, M. S., & Baranowski, C. (1998). 1998 Volvo Award Winner in Basic Science Studies: Lumbar Spine Fusion by Local Gene Therapy With a cDNA Encoding a Novel Osteoinductive Protein (LMP-1). *Spine*, 23(23), 2486-2492.

Creswell, J. W., & Garrett, A. L. (2008). The "movement" of mixed methods research and the role of educators. *South African Journal of Education*, 28(3), 321-333.

Zarmpou, T., Saprikis, V., Markos, A., & Vlachopoulou, M. (2012). Modeling users' acceptance of mobile services. *Electronic Commerce Research*, 12(2), 225-248.

Aaron, H. B., Fainstein, D., & Kotler, G. R. (2003). Diffusion-Limited Phase Transformations: A Comparison and Critical Evaluation of the Mathematical Approximations. *Journal of applied physics*, 41(11), 4404-4410.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.

Cavana, R., & Maani, K. (2000, August). A methodological framework for integrating systems thinking and system dynamics. In *Proceedings of the 18th International Conference of the System Dynamics Society* (pp. 6-10).

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: an integrated model. *MIS quarterly*, 27(1), 51-90.

Rayport, J. F., & Jaworski, B. J. (2002). *Introduction to e-Commerce*. McGraw-Hill/Irwin marketplaceU.

Greening, D. W., & Turban, D. B. (2000). Corporate social performance as a competitive advantage in attracting a quality workforce. *Business & Society*, 39(3), 254-280.

Gunasekaran, A., & Ngai, E. W. (2005). Build-to-order supply chain management: a literature review and framework for development. *Journal of Operations Management*, 23(5), 423-451.

Wolfenbarger, M., & Gilly, M. C. (2003). eTailQ: dimensionalizing, measuring and predicting etail quality. *Journal of retailing*, 79(3), 183-198.

Turel, O., Serenko, A., & Bontis, N. (2007). User acceptance of wireless short messaging services: deconstructing perceived value. *Information & Management*, 44(1), 63-73.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in international marketing*, 20(1), 277-319.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 27(3).

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management science*, 35(8), 982-1003.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.

Taylor, S., & Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International journal of research in marketing*, 12(2), 137-155.